

## POWER THROTTLING METHOD AND APPARATUS

## ABSTRACT OF DISCLOSURE

Disclosed is an apparatus which deactivates both the AC as  
5 well as the DC component of power for various functions in a  
CPU. The CPU partitions dataflow registers and arithmetic units  
such that voltage can be removed from the upper portion of  
dataflow registers when the software is not utilizing same.  
Clock signals are also prevented from being applied to these  
10 non-utilized components. As an example, if a 64 bit CPU  
(processor unit) is to be used with both 32 and 64 bit software,  
the mentioned components may be partitioned in equal sized upper  
and lower portions. The logic signal for activating the removal  
of voltage may be obtained from a software-accessible  
15 architected control register designated as a machine state  
register in some CPUs. The same logic may be used in connection  
with removing voltage and clocks from other specialized  
functional components such as the floating point unit when  
software instructions do not presently require same.